COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Roslyn Converters, Inc.
1106 West Roslyn Road, Colonial Heights, Virginia
Permit No. PRO50833

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Roslyn Converters, Inc. has applied for a Title V Operating Permit for its rotogravure printing facility located at 1106 West Roslyn Road, Colonial Heights, Virginia. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Air Permit Manager:_____ Date:_____

Regional Deputy Director:_____ Date:_____

Statement of Legal and Factual Basis for Roslyn Converters
Registration No: 50833 Date: May 17, 2001

1. Introduction

Facility Information

Permittee
Mundet, Inc.
P.O. Box 70
Colonial Heights, VA 23834

Facility
Roslyn Converters
1106 West Roslyn Road
Colonial Heights, VA 23834

Responsible Official
Mr. Michael W. Gay
Plant Manager
(804)748-3319

Contact person
Mr. Gordon Gunn
Environmental, Health, and Safety
(804) 748-3319

AIRS Identification Number: 51-570-0105

Source Description

Roslyn Converters, Inc. prints and slits cigarette tipping paper. The rotogravure printing process is supported by natural gas-fired hot oil boilers which supplies indirect process heat for drying the printed material. The regenerative thermal oxidizer controls emissions from the (P1, P2 and P3) three rotogravure presses and (PW1) parts washer. Based on the SIC description provided below and Roslyn Converters' process, the SIC code of 2754 Commercial Printing, Gravure would be the applicable SIC code.

SIC Description for 2754

Major Group 27: Printing, Publishing, And Allied Industries
2754 Commercial Printing, Gravure

Establishments primarily engaged in gravure printing. Establishments primarily engaged in making and preparing plates for
printing are classified in Industry 2796.

Bread wrappers: gravure printing
Business forms, except manifold: gravure printing
Calendars, gravure printing not publishing
Cards, except greeting: gravure printing
Catalogs: gravure printing (not publishing)
Circulars: gravure printing
Color printing: gravure

Coupons: gravure printing
Directories: gravure printing (not publishing)
Envelopes: gravure printing
Facsimile letters: gravure printing
Fashion plates: gravure printing
Gravure printing Imprinting: gravure Intaglio printing
Labels: gravure printing
Letters, circular and form: gravure printing
Magazines: gravure printing (not publishing)
Maps: gravure printing (not publishing)
Menus: gravure printing
Music, sheet: gravure printing (not publishing)
Newspapers: gravure printing (not publishing)
Periodicals: gravure printing (not publishing)
Photogravure printing
Playing cards: gravure printing
Postcards, picture: gravure printing
Posters: gravure printing
Printing, commercial or job: gravure
Printing: gravure, photogravure, rotary photogravure, and rotogravure
Rotary photogravure printing
Rotogravure printing
Schedules, transportation: gravure printing
Seals: gravure printing
Souvenir cards: gravure printing
Stationery: gravure printing
Telephone directories, gravure printing not publishing
Tickets: gravure printing
Trading stamps: gravure printing
Visiting cards: gravure printing
Wrappers: gravure printing

Compliance History

A review of the compliance files for this facility reveals this source (formerly Colonial Heights Packaging, Inc.) had a noncompliance issue. The source was first permitted to operate printing presses and paper coaters in 1977. The source was then cited for an emissions violation in August of 1987. The violation resulted in a consent agreement and order (CA&O). The CA&O resulted in the issuance of a PSD permit on July 31, 1989 and amended November 15, 1990. (When the current permit (August 31, 1994) was issued the area the source was located in was no longer considered an attainment area but instead a nonattainment area. This is the reason the current permit is solely a new source

review permit for to construct and operate. In addition, this facility was also not subject to nonattainment permitting.)

2. Emissions Inventory

The source submitted attachments with the permit application of which is attached to this statement of basis. The emissions estimates provided indicate compliance with existing limitations on potential to emit (PTE). The emissions inventory from VA DEQ's data system called CEDS (Comprehensive Environmental Data System) is also included which demonstrates compliance.

3. Applicable Requirements

Emission Unit Applicable Requirements

Each of the units listed in the significant emissions units table **(Table No. II B. 1)** are regulated in a facility wide NSR permit issued on January 25, 2001. The listing of applicable requirements are as follows:

Table No. II B. 1. Significant Emissions Unit Inventory List - Process Units

Emission Unit No.	Stack No.	Emission Unit Description	Manufacturer and Date of Construction	Size/Rated Capacity*
P1	S1	8-Color Station Rotogravure Printing Press with a web width of 40 inches (Used for cigarette tipping paper)	Rotomec 1969 (exact date of manufacture unknown) upgraded in 1996	2,000 ft./min and 3,504.6 lbs of VOCs/hr
P2	S1	2-Color Station Coater associated with a rotogravure press with a web width of 48 inches (Used for cigarette tipping paper)	Custom built and designed in-house for rotogravure printing in the 1940's (exact date of manufacture is unknown)	2,000 ft./min. and 876.1 lbs of VOCs/hr

Table No. II B. 1. Significant Emissions Unit Inventory List - Process Units

Emission Unit No.	Stack No.	Emission Unit Description	Manufacturer and Date of Construction	Size/Rated Capacity*
P3	S1	6-Color Station Rotogravure Printing Press with a web width of 48 inches (Used for cigarette tipping paper)	Rotomec 1969 (exact date of manufacture unknown) upgraded in 1996	2,000 ft./min. and 3,320.1lbs of VOCs/hr
PW-1	S1	Distillation Unit and Parts Washer	Renzmann/ 2/86	437.5 lbs of VOCs/hr
T1**	N/A	One Unpainted Variable Vapor Space Solvent Storage Tank	Capital Iron Works Constructed in 1992, installed 4/1/93	8,330 gals.
T2**	N/A	One Unpainted Variable Vapor Space Solvent Storage Tank	Capital Iron Works Constructed in 1992, installed 4/1/93	8,330 gals.

* The inclusion of values for equipment rated capacities as listed above, are for informational purposes and are not applicable requirements.

** T1 & T2 were considered significant emissions units as they both had annual throughput limitations and a requirement of a variable vapor space for control of emissions from these sources.

Permit Dated January 25, 2001 - The applicable requirements from the permit conditions are listed below.

PROCESS REQUIREMENTS

3. **Emission Controls and Control Efficiency** – Volatile organic compound (VOC) emissions from the (P3) six (6) station rotogravure printing press shall be controlled by a total enclosure and a thermal oxidizer with a destruction efficiency of 95 percent. The thermal oxidizer shall be provided with adequate access for inspection.

(9 VAC 5-50-260 and 9 VAC 5-80-10 H, Condition no. 3 of the NSR permit issued on 1/25/01)

4. **Emission Controls and Control Efficiency** - Volatile organic compound (VOC) emissions from the (P1) eight (8) station Rotomec rotogravure printing press, the (P2) two (2) station rotogravure paper coater and the (PW1) parts press washer shall be controlled by a total enclosure and a thermal oxidizer with a destruction efficiency of 90 percent. The thermal oxidizer shall be provided with adequate access for inspection.
(9 VAC 5-80-10 H and 9 VAC 5-50-260, Condition no. 4 of the NSR permit issued on 1/25/01)

5. **Emission Controls** - Volatile organic compound (VOC) emissions from the (T1 & T2) stored solvent tanks shall be controlled by the use of a variable vapor space tank.
(9 VAC 5-80-10 H and 9 VAC 5-50-260, Condition no. 5 of the NSR permit issued on 1/25/01)

6. **Control Parameters and Monitoring Devices** - Each of the thermal oxidizers shall maintain a minimum combustion zone temperature of 1400^{o}F and a residence time of 1 second. The thermal oxidizer shall be equipped with a device to continuously measure the temperature of the combustion zone.
(9 VAC 5-80-10 H, Condition no. 6 of the NSR permit issued on 1/25/01)

7. **Total Enclosure** - The total enclosure shall meet the following criteria:

   a. Any natural draft openings shall be at least 4 equivalent opening diameters from each VOC emitting point;

   b. The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

   c. The average facial velocity of air through the natural draft openings shall be at least 200 feet per minute and the direction of flow shall be into the enclosure.

   d. All access doors and windows shall be closed during routine operation of the presses.

   (9 VAC 5-80-10 H, Condition no. 7 of the NSR permit issued on 1/25/01)

8. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods.
(9 VAC 5-50-30 F, Condition no. 8 of the NSR permit issued on 1/25/01)

OPERATING/EMISSION LIMITATIONS

9. **Throughput** - The throughput of VOC to the (P3) six (6) station press shall be no more than 3,320.1 pounds per hour, 79,683.4 pounds per day, and 2,960 tons per year. Annual VOC throughput to the (P3) six (6) station press shall be calculated as the sum of each consecutive 12 month period.
(9 VAC 5-80-10 H, Condition no. 9 of the NSR permit issued on 1/25/01)

10. **Throughput** - The throughput of VOC to the (P1) eight (8) station Rotomec press shall be no more than 3,504.6 pounds per hour, 84,110.4 pounds per day, and 1,620 tons per year. Annual VOC throughput to the (P1) eight (8) station Rotomec press shall, calculated as the sum of each consecutive 12 month period.
(9 VAC 5-80-10 H, Condition no. 10 of the NSR permit issued on 1/25/01)

11. **Throughput** - The throughput of VOC to the (P2) two (2) color coater shall be no more than 876.1 pounds per hour, 21,027.6 pounds per day and 900 tons/yr. Annual VOC throughput shall be calculated as the sum of each consecutive 12 months period.
(9 VAC 5-80-10 H, Condition no. 11 of the NSR permit issued on 1/25/01)

12. **Throughput** - The throughput of VOC to the (PW1) press parts washer shall be no more than 437.5 pounds per hour, 3,500.0 pounds per day and 100 tons/yr. Annual VOC throughput shall be calculated as the sum of each consecutive 12 months period.
(9 VAC 5-80-10 H, Condition no. 12 of the NSR permit issued on 1/25/01)

13. **Throughput** - The throughput of VOC to each (T1 &T2) variable space solvent tanks shall not exceed 686,000 gallons per year of solvent for a total of 1,372,000 gallons per year calculated as the sum of each consecutive 12 month period.
(9 VAC 5-80-10 H, Condition no. 13 of the NSR permit issued on 1/25/01)

14. **Fuel** - The approved fuel for the Fulton Fluid Heater is natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-10, Condition no. 14 of the NSR permit issued on 1/25/01)

15. **Emission Limits** - Emissions from the operation of the (PW1) parts washer shall not exceed the limits specified below:

Volatile Organic Compounds	21.9 lbs/hr	524.4 lbs/day	10.0 tons/yr

(9 VAC 5-50-260, Condition no. 15 of the NSR permit issued on 1/25/01)

16. **Emission Limits** - Emissions from the operation of the (P3) six (6) station press shall not

exceed the limits specified below:

Volatile Organic Compounds	166.0 lbs/hr	3,984.2 lbs/day	143.0 tons/yr

(9 VAC 5-50-260, Condition no. 16 of the NSR permit issued on 1/25/01)

17. **Emission Limits** - Emissions from the operation of the (P1) eight (8) station Rotomec Press shall not exceed the limits specified below:

Volatile Organic Compounds	350.5 lbs/hr	8,411.0 lbs/day	162.0 tons/yr

(9 VAC 5-50-260, Condition no. 17 of the NSR permit issued on 1/25/01)

18. **Emission Limits** - Emissions from the operation of the (P2) two (2) station color coater press shall not exceed the limits specified below:

Volatile Organic Compounds	87.6 lbs/hr	2,102.6 lbs/day	90.0 tons/yr

(9 VAC 5-50-260, Condition no. 18 of the NSR permit issued on 1/25/01)

20. **Visible Emission Limit** - Visible emissions from the thermal oxidizer shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.
(9 VAC 5-50-80, 9 VAC 5-50-260 and 9 VAC 5-50-20, Condition no. 20 of the NSR permit issued on 1/25/01)

RECORDS

21. **On Site Records** - The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit and shall be consistent with DEQ policy. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

a. Daily records for both (P1 and P3) presses and the (P2) paper coater shall demonstrate compliance with the requirements in Air Quality Program Policies and Procedures, Number AQP-4.

b. The yearly throughput of VOC to the (T1 & T2) storage tanks and the (PW1) parts washer calculated as the sum of each consecutive 12 month period .

c. Total of the previous twelve months VOC emissions.

These records shall be available for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-50-50, Condition no. 21 of the NSR permit issued on 1/25/01)

24. **Notification for Facility or Control Equipment Malfunction** - If, for any reason, the permitted facility or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Director, Piedmont Regional Office within four (4) business hours of the occurrence. The portion of the facility which is subject to the provision of Rule 4-3 or 5-3 (toxics) shall shut down immediately upon request of the DEQ. In addition, the owner shall provide a written statement, within 14 days, explaining the problem, corrective action taken, and the estimated duration of the breakdown/shut down.
(9 VAC 5-20-180 C and 9 VAC 5-20-180 F 3, Condition no. 24 of the NSR permit issued on 1/25/01)

26. **Change of Ownership** - In the case of a transfer of ownership of stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Piedmont Region of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-10 O, Condition no. 26 of the NSR permit issued on 1/25/01)

4. 40 CFR 60 NSPS Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984

Applicability

Roslyn Converters' solvent storage tanks (T1 & T2) are not applicable to Subpart Kb of 40 CFR part 60 even though the tanks were constructed after July 23, 1984 which is the applicability date (Tanks were completed on April 1, 1993). The tanks' capacities are 8,330 gallons (each) of which is less than the 40 cubic meters (or approximately 10,000 gallons) minimum applicability capacity under 40 CFR 60.110b(a).

5. 40 CFR 63 NSPS Subpart KK - National Emission Standards for the Printing and Publishing Industry

Applicability

Subpart KK states the following concerning applicability:

"(a) The provision of this subpart apply to:

(1) Each new and existing facility that is a major source of hazardous air pollutants (HAPs) as defined in 40 CFR 63.2 at which

publication rotogravure, or wide-web flexographic printing presses are operated,

(2) and each new and existing facility at which publication rotogravure, or wide-web operated for which the owner or operator chooses to commit to, and meets the criteria of paragraphs (a)(2)(i) and (a)(2)(ii) of this section for purposes of establishing the facility to be an area source with respect to this subpart."

Roslyn Converters currently has a small number of inks of which they use, which contains a HAP called dibutyl phthalate which has a low vapor pressure. Roslyn Converters has stated this chemical is not released as an emission and either stays with the product or is removed in their hazardous waste stream. However even though no HAPs are emitted, Roslyn Converters process is still capable of using inks and solvents which could contain a major amount of HAPs. As a result, the potential to emit based on this capability would be over the major source threshold of HAPs of 10 tons/yr of a single HAP and 25 tons/yr of an aggregate of HAPs. Conditions concerning area source requirements were inserted into the Title V permit under the facility wide section to order to commit Roslyn Converters to being an area source.

6. <u>Obsolete conditions from permits that can be removed</u>

From the January 25, 2001 permit:

Condition 8 was considered obsolete as it was determined this condition would be covered under the facility wide conditions and general requirements pertaining to the annual compliance certification (Part III B. 15). It was surmised that if any compliance stack testing needed to be performed a test port would need to be put in place at that time.

The Part 70 regulations (condition 23 of the January 25, 2001 permit) define specific inspection and entry requirements consistent with the issuance of a TITLE V permit. These requirements are described in general condition 14 of the Title V permit and are at least as stringent as the NSR requirements. Inclusion of these conditions would be redundant and the requirements have been overtaken by the Title V (Part 70) regulations.

Condition 26 of the January 25, 2001 permit is not being included as an applicable requirement in the Title V permit because it is redundant. The general applicable requirement condition 18 describes the requirements for transfer of ownership relative to the Title V permit. The transfer of ownership requirements for the NSR permit are therefore inappropriate for inclusion in the Title V permit.

7. **Generally Applicable Requirements** - Certain conditions within existing NSR permits may be applicable to all newly constructed or modified equipment that receive a permit. Below is a listing of these conditions:

24. **Notification for Facility or Control Equipment Malfunction** - If, for any reason, the permitted facility or related air pollution control equipment fails or malfunctions and may cause excess emissions for more than one hour, the owner shall notify the Director, Piedmont Regional Office within four (4) business hours of the occurrence. The portion of the facility which is subject to the provision of Rule 4-3 or 5-3 (toxics) shall shut down immediately upon request of the DEQ. In addition, the owner shall provide a written statement, within 14 days, explaining the problem, corrective action taken, and the estimated duration of the breakdown/shut down.
(9 VAC 5-20-180 C and 9 VAC 5-20-180 F 3, Condition no. 24 of the NSR permit issued on 1/25/01)

25. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E, Condition no. 25 of the NSR permit issued on 1/25/01)

27. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control

equipment, and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board), and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information. (9 VAC 5-170-60 and 9 VAC 5-20-160, Condition no. 27 of the NSR permit issued on 1/25/01)

28. **Permit Copy** - A copy of this permit shall be maintained on the premises of the facility to which it applies.
(9 VAC 5-170-160, Condition no. 28 of NSR permit issued on 1/25/01)

These conditions are being retained in the Title V permit because 1) they are applicable requirements generally applied to all modified and newly constructed equipment permitted through the minor NSR permit program; 2) they have an impact on the prevention of excess emissions and therefore are not environmentally insignificant; and 3) they require recordkeeping and reporting that may be included in periodic monitoring requirements.

8. State-Applicable requirements from NSR Permit Conditions – NA

9. Future Applicable Requirements - NA

10. Inapplicable Requirements -

The tanks (T1 & T2) are not subject to the State's Rule 4-25 (emission standards for VOC and transfer operations). The reason this rule is inapplicable is the source states the source uses VOC's with a vapor pressure < 1.5 PSIA under actual storage and filling conditions.

11. Standard Terms and Conditions

Facility Wide Conditions and Permit Terms

New source standard for visible emissions - The new source standard applies to the heaters used to provide heat to the presses (H1 & H2) and the tanks used to store the solvent used in the process (T1 & T2).

The new source opacity standard is not applied to the thermal oxidizer because it has an existing 5% opacity limit of which is BACT for

this source. The 5% opacity limit is more stringent than the new source standard.

General Permit Conditions

Recordkeeping and reporting
Failure/Malfunction Reporting
Permit Deviation Reporting
Severability
Duty to Comply
Need to Halt or Reduce Activity not a Defense
Permit Action for Cause
Property Rights
Duty to Submit Information
Duty to Supplement or Correct Application
Duty to Pay Permit Fees
Changes to Permits for Emissions Trading
Alternative operating scenarios
Inspection and entry requirements
Annual Compliance Certification
Reopening For Cause
Permit Availability
Transfer of Permits
Permit Expiration
Malfunction as an Affirmative Defense
Permit Revocation or Termination for Cause

12. Insignificant Activities

Table No. II A. Insignificant Emission Unit Inventory List

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity* (5-80-720 C.)
H1	Natural Gas Fired** Fulton Fluid Heater	5-80-720 B., C.2.a.	PT, PM10, SO_2, NO_2, CO, VOC	6.0 mmbtu/hr input
H2	Natural Gas Fired** Fulton Fluid Heater	5-80-720 B., C.2.a.	PT, PM10, SO_2, NO_2, CO, VOC	6.0 mmbtu/hr input
HC1	Natural Gas Fired Modine Space Heater (Ceiling Mounted)	5-80-720 A.	PT, PM10, SO_2, NO_2, CO, VOC	0.05 mmbtu/hr input
HC2	Natural Gas Fired Modine Space Heater (Ceiling Mounted)	5-80-720 A.	PT, PM10, SO_2, NO_2, CO, VOC	0.05 mmbtu/hr input

Table No. II A. Insignificant Emission Unit Inventory List

Emission Unit No.	Emission Unit Description	Citation (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity* (5-80-720 C.)
HC3	Natural Gas Fired Modine Space Heater (Ceiling Mounted)	5-80-720 A.	PT, PM10, SO_2, NO_2, CO, VOC	0.05 mmbtu/hr input
HC4	Natural Gas Fired Modine Space Heater (Ceiling Mounted)	5-80-720 A.	PT, PM10, SO_2, NO_2, CO, VOC	0.05 mmbtu/hr input

*: The inclusion of values for equipment rated capacities listed above are for informational purposes and are not applicable requirements.

**: Condition no. 14 in the January 25, 2001 NSR permit limits the type of fuel that can be used: The approved fuel for the Fulton Fluid Heater is natural gas. A change in the fuel may require a permit to modify and operate. C 5-80-10)

13. Periodic Monitoring

The EPA periodic monitoring guidance, dated September 18, 1998, indicates on page 4 that periodic monitoring is required for each emission point at a source, subject to Title V of the Act, that is subject to an applicable requirement. This facility has an eight station printing press (P1) , a two station coater (P2), a six station printing press (P3), and a partswasher (PW1) which require that periodic monitoring be applied. Periodic monitoring for these emissions units is being defined as follows:

Periodic Monitoring for the (P1) eight station printing press, (P2) the two station coater, the (P3) six station printing press, and the (PW1) partswasher.

The information listed below describes the periodic monitoring requirements for all of the applicable requirements for significant sources in the NSR permit issued on January 25, 2001. The requirements are generally contained in the permit issued on January 25, 2001 but some conditions have been developed to ensure that the periodic monitoring requirements of 9 VAC 5-80-110 E.2. have been met.

Condition 3 of the January 25, 2001 NSR permit,

Limitation: Volatile organic compound (VOC) emissions from the (P3) six (6) station rotogravure printing press shall be controlled by a total enclosure and a thermal oxidizer with a destruction efficiency of 95 percent. The thermal oxidizer shall be provided with adequate access for inspection. **Parameter:** Determine if the 95% destruction efficiency is being met and if the permanent total enclosure is still being used to capture

all of the VOC emissions. **Monitoring and Recordkeeping:** Monitoring and recordkeeping will be as according to the monitoring and recordkeeping, for condition nos. 6, 7, and 21 of the January 25, 2001 NSR permit.

Condition no. 6 has a minimum combustion temperature requirement which will ensure the destruction efficiency is being met. Along with this requirement, Roslyn Converters is required to have a device to continuously measure this temperature in the combustion zone. This unit's destruction efficiency was previously tested in an initial performance test and was found to significantly exceed the required 95%.) In addition, the following two additional periodic monitoring requirements were added to ensure this destruction efficiency was being met:

The thermal oxidizer's combustion zone temperature readout graph shall be reviewed to determine if it is in compliance with the required 1400 ^{o}F minimum combustion zone temperature and recorded every 8 hours.
(9 VAC 5-80-110 E and F)

An annual calibration shall be performed on the current thermocouples with a redundant thermocouple and annual records stating the date the calibration was performed along with the calibration results.
(9 VAC 5-80-110 E and F)

Condition no. 7 has a 200 fpm facial velocity requirement along with a requirement for the direction of flow to be into the enclosure which will ensure the total enclosure is still maintaining the 100% capture efficiency. This is provided all access doors and windows are closed during routine operation of the presses.

Reporting: Reporting will be as according to this Title V's general requirement conditions 1, 2, and 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification.
Condition 4 of the January 25, 2001 NSR permit,

Limitation: Volatile organic compound (VOC) emissions from the (P1) eight (8) station Rotomec rotogravure printing press, the (P2) two (2) station rotogravure paper coater and the (PW1) parts press washer shall be controlled by a total enclosure and a thermal oxidizer with a destruction efficiency of 90 percent. The thermal oxidizer shall be provided with adequate access for inspection. **Parameter:** Determine if the 90% destruction efficiency is being met and if the permanent total enclosure is still being used to capture all of the VOC emissions. **Monitoring and Recordkeeping:** Monitoring and recordkeeping will be as according to the monitoring and recordkeeping, for condition nos. 6, 7 and 21 of the January 25, 2001 NSR permit.

Condition no. 6 has a minimum combustion temperature requirement which will ensure the destruction efficiency is being met. Along with this requirement, Roslyn Converters is required to have a device to continuously measure this temperature in the

combustion zone. This unit's destruction efficiency was previously tested in an initial performance test and was found to significantly exceed the required 95% in condition no.3.) In addition, the following two additional periodic monitoring requirements were added to ensure this destruction efficiency was being met:

The thermal oxidizer's combustion zone temperature readout graph shall be reviewed to determine if it is in compliance with the required 1400 ^{o}F minimum combustion zone temperature and recorded every 8 hours.
(9 VAC 5-80-110 E and F)

An annual calibration shall be performed on the current thermocouples with a redundant thermocouple and annual records stating the date the calibration was performed along with the calibration results.
(9 VAC 5-80-110 E and F)

Condition no. 7 has a 200 fpm facial velocity requirement along with a requirement for the direction of flow to be into the enclosure which will ensure the total enclosure is still maintaining the 100% capture efficiency. This is provided all access doors and windows are closed during routine operation of the presses.

Reporting: Reporting will be as according to this Title V's general requirement conditions 1, 2, and 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification.

Condition 5 of the January 25, 2001 NSR permit,

Limitation: Volatile organic compound (VOC) emissions from the (T1 & T2) stored solvent tanks shall be controlled by the use of a variable vapor space tank. **Parameter:** Determine if the variable vapor space is in existence. **Monitoring, Recordkeeping, and Reporting:** No monitoring, recordkeeping, and reporting will not need to be performed as the tank is constructed with the variable vapor space and should always be in place until the tank is torn down.

Condition 6 of the January 25, 2001 NSR Permit,

Limitation: Each of the thermal oxidizers shall maintain a minimum combustion zone temperature of 1400^{o}F and a residence time of 1 second. The thermal oxidizer shall be equipped with a device to continuously measure the temperature of the combustion zone. **Parameter:** Determine if the minimum combustion zone temperature of 1400^{o} F is being met and determining if the minimum residence time of 1 second is being met. **Monitoring:** The combustion temperature is being continuously monitored by the three thermocouples along with a readout graph of the combustion temperature. The following is the rational for not having periodic monitoring for the 1 second residence time:

It was determined the monitoring for the minimum residence time of 1 second is already being met and will continue to be met. As Roslyn Converter's has stated the thermal oxidizer was designed for 100,000 scfm with a residence time of greater than one second. If the speed of the fan decreases and the chamber size remains constant the residence time will only increase which will only increase the amount of time for destruction of VOCs.

Recordkeeping: The temperature is continuously recorded on a readout graph and the readout is reviewed to determine if the combustion temperature is below 1400^{o} F and is recorded once per shift. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this TiStle V permit.

Condition 7 of the January 25, 2001 NSR Permit,

Limitation:
The total enclosure shall meet the following criteria:

a. Any natural draft openings shall be at least 4 equivalent opening diameters from each VOC emitting point;

b. The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

c. The average facial velocity of air through the natural draft openings shall be at least 200 feet per minute and the direction of flow shall be into the enclosure.

d. All access doors and windows shall be closed during routine operation of the presses.

Parameter: Determine if the permanent total enclosure continues to be a permanent total enclosure (i.e. captures all VOC emissions to be sent to the thermal oxidizer). "a." and "b." of the above limitation have already been met as there are presently no natural draft openings. "c." and "d." could possibly vary during the current operations which may impact whether the enclosure continues to be a permanent total enclosure.
Monitoring: The following condition was added to the periodic monitoring section of the Title V permit to determine if the average facial velocity of at least 200 ft/min. inward was being met:

Periodic Monitoring of the average facial velocity of 200 ft/min which corresponds to a pressure drop of 0.013 mm of Hg or 0.007 in. of H_2O as required for a permanent total enclosure designation shall be demonstrated by the differential pressure meter reading. The differential pressure records shall be recorded and reviewed once per shift. In

addition, verification of direction of air flow is inward shall be verified by a negative pressure.

Recordkeeping: The differential pressure meter records and **direction of air flow** shall be recorded and reviewed once per shift. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

Condition no. 9 of the January 29, 2001 NSR Permit,

Limitation: The throughput of VOC to the (P3) six (6) station press shall be no more than 3,320.1 pounds per hour, 79,683.4 pounds per day, and 2,960 tons per year. Annual VOC throughput to the (P3) six (6) station press shall be calculated as the sum of each consecutive 12 month period. **Parameter:** Daily and annual (based on a 12 month consecutive period) ink usage along with thinning solvents for the (P3) six station press. **Recordkeeping:** Maintain records as according to AQP-4. **Monitoring:** VOC throughput calculated daily and monthly. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

Condition no. 10 of the January 25, 2001 NSR Permit,

Limitation: The throughput of VOC to the (P1) eight (8) station Rotomec press shall be no more than 3,504.6 pounds per hour, 84,110.4 pounds per day, and 1,620 tons per year. Annual VOC throughput to the (P1) eight (8) station Rotomec press shall, calculated as the sum of each consecutive 12 month period. **Parameter:** Daily and annual (annual based on a 12 month consecutive period) ink usage along with thinning solvents for the (P1) eight station press. **Recordkeeping:** Maintain records as according to AQP-4. **Monitoring:** VOC throughput calculated daily and monthly. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

Condition no. 11 of the January 25, 2001 NSR permit,

Limitation: The throughput of VOC to the (P2) two (2) ***station*** color ***paper*** coater* shall be no more than 876.1 pounds per hour, 21,027.6 pounds per day and 900.0 tons/yr. Annual VOC throughput shall be calculated as the sum of each consecutive 12 months period. **Parameter:** Daily and annual (based on a 12 month consecutive period) coating usage along with thinning solvents for the two color coater. **Recordkeeping:** Maintain records as according to AQP-4. **Monitoring:** VOC

throughput calculated daily and monthly. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

* Since, this paper coater performs printing also, it would be subject to the "Emission Standards for Packaging Rotogravure, and Publishing Rotogravure Printing Lines" (Rule 4-36) rather than "Emission Standards for Paper and Fabric Coating Application Systems" (Rule 4-31) of which it exceeds the emission standards in this rule.

Condition no. 12 of the January 25, 2001 NSR permit,

Limitation: The throughput of VOC to the (PW1) press parts washer shall be no more than 437.5 pounds per hour, 3500.0 pounds per day and 100.0 tons/yr. Annual VOC throughput shall be calculated as the sum of each consecutive 12 months period. **Parameter:** Daily and annual (based on a 12 month consecutive period) solvent usage for the partswasher. **Recordkeeping:** Maintain records as according to AQP-4 -***This is based on the cleanup emissions are included in this operation***. **Monitoring:** VOC throughput calculated daily and monthly. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

Condition no. 13 of the January 25, 2001 NSR permit,

Limitation: The throughput of VOC to each (T1 & T2) variable space solvent tanks shall not exceed 686,000 gallons per year of solvent for a total of 1,372,000 gallons per year calculated as the sum of each consecutive 12 month period. **Parameter:** Annual throughput **Recordkeeping:** Records shall be kept of the yearly throughput of VOC to the storage tanks calculated as the sum of each consecutive 12 month period. **Monitoring:** Monitoring shall be determined by monthly records. **Reporting:** The reporting shall be performed as according to the general requirement condition no. 3, the Failure/Malfunction Report Condition, Permit Deviation Report Condition and Annual Compliance Certification as stated in this Title V permit.

Conditions 9 - 12 from the NSR 1/25/01 permit - The hourly emission limits were established based on the worst case ink and diluent used on an hourly capacity of each of the (P1, P2 and P3) presses and coaters and the hourly emission limits for the (PW1) partswasher was based on 50% evaporation of which would be a conservative estimate from this type of source. Therefore, if each of the (P1, P2 and P3) presses are operated at capacity (and not beyond each of the (P1, P2 and P3) presses capacities) for the worst case ink and solvent, or below, there should not be a violation of the hourly emission rates. In addition, the daily recordkeeping per line (inclusive of

hours of operation per day) as per AQP-4 will verify Roslyn Converters is in compliance with their hourly emission limits, daily emission limits and annual emission limits. The annual emission limits established for the (P1, P2, and P3) presses, coaters, and (PW1) partswashers are based on the expected ink/coating, diluent usage and cleanup solvents used on an annual basis of which is limited in terms of the annual VOC throughput limit of the permit. Therefore, as long as the throughput limit is not violated, there should not be any possibility that the criteria pollutant emission limits will be violated. Recordkeeping demonstrating compliance with the hourly, daily, and annual throughput limits can be used to demonstrate compliance with the criteria pollutant emission limits, therefore the throughput limits satisfy the periodic monitoring requirement for the emission limits.

The 5% opacity standard applied to the thermal oxidizer is a state BACT requirement for VOC operations. The source will be required to log the appearance of the vented emissions from the coating operation and institute corrective action when visible emissions exist. Depending on whether the corrective action is successful the source will be required to perform a method 9 to demonstrate compliance or to log the corrective action taken and return to the weekly monitoring of emissions opacity.

14. Compliance Assurance Monitoring (CAM)

Each of the (P3) six station and the (P1) eight station printing presses have controlled allowable emissions greater than 100.0 tons/yr therefore making each of these emission units subject to compliance assurance monitoring (CAM). The facility will be subject to CAM upon issuance of this Title V permit as Roslyn Converters submitted their application after the CAM deadline. However, the current facility wide NSR permit already has CAM in it. There were a few gap filling measures inserted into this Title V permit to clarify some of the current monitoring. For example, the current permit has a one second residence time in conjunction with temperature to determine if the thermal oxidizer is operating properly but yet no air flow requirement equating to the one second residence time. However, the thermal oxidizer currently has three thermocouples to measure the combustion zone temperature along with a temperature readout graph. Upon further investigation, it appears from reviewing the MACT KK, it only requires for oxidizers other than a catalytic oxidizer a calibrated temperature monitoring device equipped with a continuous recorder. The thermocouples are required to be installed in the combustion zone of the chamber of which Roslyn Converters, Inc. has. In addition, the temperature already has a minimum combustion zone temperature of 1400^{o} F. A requirement was added to the periodic monitoring by adding the requirement to have an annual calibration of the current thermocouples with a redundant thermocouple and records of the date of calibration along with the results of the calibration.

The MACT KK also requires the following for capture efficiency:

"(A) Identifies the operating parameter to be monitored to ensure that the capture efficiency measured during the initial compliance test is maintained,

(B)....

(C)...."

The operating parameter to be measured by Roslyn Converters, Inc. to ensure the 100% capture efficiency will be maintained by a differential pressure meter to ensure it is meeting the average facial velocity range of a minimum of 200 fpm inward which corresponds to a pressure drop of 0.013 mm of Hg or 0.007 in. of H_2O. Another requirement was added to verify the inward direction by having a negative pressure reading.

The thermal oxidizer also has a 5% opacity limit in the January 25, 2001 NSR facility wide permit which will ensure the thermal oxidizer and the permanent total enclosure is being operated properly. In addition to this requirement a periodic monitoring condition was added to evaluate the opacity on a weekly basis and if there was a problem with the visible emission it was to be corrected as expeditiously as possible and recorded along with the cause and corrective measures taken and recorded.

Other conditions in the January 25, 2001 permit which ensures the thermal oxidizer is operating properly requires maintenance schedules and records for the air pollution equipment, along with keeping spare parts on hand for repair, and written operating instructions for operation of the air pollution equipment along with training for the operators of the air pollution equipment.

Also, each of the (P3) six station and the (P1) eight station presses have an hourly, daily, and an annual VOC throughput limitation in the January 25, 2001 NSR facility wide permit which ensures proper operation of the permanent total enclosure and along with meeting the destruction efficiencies of the thermal oxidizer. (For clarification, this facility has a 95% and 90% destruction efficiencies for the thermal oxidizer for the following reason:

When the (P1) eight station press, coater, and the (PW1) partswasher were installed BACT for a thermal oxidizer was 90% then when the (P3) six station rotogravure press was to be installed a 95% destruction efficiency was considered BACT for the same thermal oxidizer.

The records are also kept daily as per the State's AQP-4 of which is part of the State's SIP.

15. <u>Streamlined conditions - NA</u>

16. Public Participation

The proposed permit was placed on public notice in the Richmond Times Dispatch from February 7, 2001 to March 8, 2001 (at the close of business day).

EPA Comments were received in a letter to DEQ-Piedmont Regional Office (PRO) from Dave Campbell, of EPA Region III. The following are DEQ-PRO's response to EPA's comments regarding the draft Title V operating permit for Roslyn Converters, Inc.

EPA Comment #1:

"1. General Comment: We recommend that you use the emission unit identification number along with the proper name when referencing emission units within individual permit conditions. We feel identification numbers add clarity to the permit, particularly when referencing multiple emission units with the same or similar proper names."

VA DEQ's Response #1: Anywhere in the permit and statement of basis which mentioned an emission unit, the corresponding reference number was added for that emission unit. Anywhere in the permit and statement of the basis which mentioned the reference number for the emission unit but not the proper name of the unit, the proper name was added.

EPA Comment #2:
2. "Periodic Monitoring and Recordkeeping for P1, P2, P3, PW1, T1 and T2 – Condition 1.f.": This condition contains the permittee's obligations regarding recordkeeping for VOC emissions from the identified emission units. You should amend this condition to indicate that the VOC content of coating material and solvents shall be determined using approved EPA test methods, e.g. 40 CFR part 60 appendix A – EPA Method 24. Material safety data sheets (MSDS) or certified product data sheets (CPDS) sheets may be relied upon provided the information contained therein is determined using approved EPA test methods."

VA DEQ's Response #2: The added periodic monitoring condition for Title V from the February, 2001 DRAFT Title V permit for Roslyn Converters, Inc. stated the following:

"Current Material Safety Data Sheets (MSDS) shall be kept on site for each surface coating and solvent, used in the facility – including the VOC content of such coatings."

The condition has now been revised to the following in the permit and the statement of basis to ensure the VOC content are being determined by EPA approved test methods:

"Records shall be kept demonstrating the VOC content and HAP content of each coating material and solvents used in the facility. Acceptable records to demonstrate VOC content shall be the use of current material safety data sheets (MSDS) or current certified product data sheets (CPDS) provided the information contained therein is determined using approved EPA test methods (e.g. 40 CFR part 60 appendix A – EPA Method 24)."

EPA Comment #3:

3. " Condition No. III.A.1 (Facility-Wide Emission Limitations): This condition contains a pollutant-specific annual emission limitation. For purposes of practical enforceability, you should amend the condition to indicate that annual emissions are to be determined for each 12-month consecutive period."

VA DEQ's Response #3: **Facility-Wide Emission Limitations Condition was changed to the following in the permit and the statement of basis to include an asterisk (*) beside the "405 tons/yr" of volatile organic compounds and the asterisk was repeated on the next line with the following statement:**

*** Annual facility wide emissions shall be determined monthly as the sum of each consecutive 12 month period.**

This is consistent with the intent of the original new source review permit as demonstrated with the VOC throughput (for each of the (P1 and P3) printing press stations, (P2) coating station and (PW1) partswasher) calculated as the sum of each consecutive 12-month period and monthly recordkeeping conditions to support the annual VOC emission limitations. In addition to this, our Air Quality Program Policies and Procedures, Number AQP-4 recordkeeping for surface coating operations and graphic arts printing processes requires the hours of operation per day and per year along with the calculated volatile organic compound emissions for each coating application system on a daily basis. In conclusion, the periodic monitoring and recordkeeping for P1, P2, P3, PW1, T1 and T2 requires the following under "1.g." of this section which should ensure the facility wide emission limitations are being complied with:

"g. Total of the **previous twelve month's emissions** which shall include:

a **monthly material balance of VOCs used** at the **facility** (i.e. Throughput of VOCs used in P1, P2, P3, PW1 and throughput of VOCs to the solvent storage tanks) along with the **calculations of emissions**."

EPA Comment #4:

This condition of the permit also contains items related to the powers of the Board to modify or

terminate the permittee's 01/25/01 NSR permit. Since these powers do not relate to the draft Title V operating permit they do not have to be included in the draft permit as applicable requirements.

VA DEQ's Response: The "suspension or revocation condition" of the January 25, 2001 NSR permit (which immediately follows after the "Facility-Wide Emission Limitations Condition") was removed from the draft Title V permit and the Statement of Basis.